



# Neutralising industrial effluent

## The problem

Acidic industrial effluent streams from chemical plants situated around Villers Saint Paul, north of Paris, in France are delivered to the ARKEMA wastewater treatment plant for purification and subsequent discharge into the River Oise. The effluent input is treated with milk of lime to neutralise its acid content. The effluent input rate is irregular (between 1500 and 3000 m<sup>3</sup> per day) and pollution peaks occur making it difficult to maintain acidity neutralisation within regulatory environmental limits.

In order to improve its processing flexibility ARKEMA decided to update its milk of lime production unit. A key requirement of the renovation specifications was the desire to retain the existing 390 m<sup>3</sup> reagent silo and thus keep its operational flexibility.

## The solution

To modernise the ARKEMA unit Lhoist considered several Calci-action<sup>®</sup> options, particularly those which offered minimal investment costs.

The chosen package comprised:

- A study of the site installations to determine the optimum location for the milk of lime preparation tank and pipes.
- The installation of a Neutralac<sup>®</sup> Duwa-Matic H 2000 unit which would allow consistent quality production and delivery of milk of lime based on Neutralac<sup>®</sup> H reagent
- The temporary loan of a Neutralac<sup>®</sup> Idra-Stock 30 mobile unit which would stock and dose ready-to-use Neutralac<sup>®</sup> SL reagent during the equipment installation phase.
- Ongoing support services including reagent deliveries and on-site technical assistance.

## Conclusion

Lhoist took charge of the entire project for ARKEMA. Including:

- The refurbishment of the existing milk of lime preparation unit
- The management of the transition phase work
- Cost optimisation of the integration and automation of the unit

As a result of this work, carried out in 1998, ARKEMA fully controls the site water purification treatment performance and thus meets regional effluent water discharge regulations.



Neutralac<sup>®</sup> Duwa-Matic H 2000 positioned under the existing silo



Mobile Neutralac<sup>®</sup> Idra-Stock 30 unit